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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,422	09/04/2003	Niraj Vasishtha	113631	7624
33047 7590 08/26/2008 GROSSMAN, TUCKER, PIERREAU & PFLEGER, PLLC 55 SOUTH COMMERCIAL STREET MANCHESTER, NH 03101				
EXAMINER				
HAIDER, SAIRA BANO				
ART UNIT		PAPER NUMBER		
1796				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/654,422

**Applicant(s)**

VASISHTHA ET AL.

**Examiner**

SAIRA HAIDER

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7, 9, 10, 13-17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7, 9, 10, 13-17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7, 9, 10, 13-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciliberto et al. (US 4,288,460) in view of Sherwood et al. (US 5,585,115).
3. Ciliberto discloses a food ingredient microcapsule comprising core particles of a normally hydroscopic, water-soluble food ingredient and a continuous encapsulating coating on said core particles. Wherein the coating consists essentially of 5-37% of a fatty acid derivative (such as polyoxyethylene sorbitan monooleate, a sugar), 15-56% of propylene glycol, and 38-62 % of a flow agent (e.g. fumed silica) (abstract). Suitable final products include a powdered beverage mix comprising the encapsulated food ingredient (claim 13).
4. Ciliberto discloses that the core material is any water-soluble ingredients of food composition which deteriorate upon exposure to the atmosphere, specifically, the reference discloses water-soluble coloring agent and flavoring agents which degrade or oxidize upon exposure to air (col. 2, lines 43-54). Ciliberto notes that the typical core particles will range between about 40 and about 850 microns (2:60-62).

Ciliberto discloses that the coating composition incorporates a flow material, wherein a preferred flow material is fumed silica derived from colloidal silicon dioxide. Suitable particle sizes include 7 to 14 nanometers. (3:19-33). Whereas applicant has claimed a structuring agent with an

average particle size from about 0.1 to about 1 microns. Accordingly, attention is directed to the Sherwood reference. Sherwood discloses that it is well known in the art to modify the properties (change the particle size, surface areas, and bulk densities) of colloidal silicon dioxide (a.k.a. fumed silica), wherein Sherwood recognizes that these modifications do not affect the silica content, specific gravity, refractive index, color or amorphous form (8:22-42). Sherwood recognizes that the silicon dioxide has a particle size in the range of about 1 nanometer to about 100 microns. Wherein it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the particle size of the colloidal silicon dioxide of Ciliberto to within the claimed range. The motivation for the particle size modification is provided by the Sherwood reference which teaches the conventionality of particle size modification and consequently lack of alteration in the silica content, specific gravity, refractive index, color or amorphous form. Wherein the claimed size of about 0.1 to about 1 micron overlaps or lies inside the range disclosed by the prior art, a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Furthermore, Sherwood makes clear that a change in the size/proportion of the colloidal silicon dioxide does not alter various properties of the composition. Accordingly, in the herein instance, the changes in size/proportion are not sufficient to patentably distinguish the claimed invention over the prior art and thus a *prima facie* case of obviousness exists. See MPEP § 2144.04.

5. Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, since the prior art teaches the identical chemical structures for the core, structuring agent and the polymer material, the properties (pendant ionic groups, formation of an ionic bridge, and decrease in oxygen and water permeability) applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d

1655, 1658 (Fed. Cir. 1990). The burden shifts to the applicant to show an unobvious difference. Note, that because the reference does not expressly teach or address the properties of the claimed invention, does not mean that the properties are not inherently disclosed. Teaching the same compound(s) inherently discloses the corresponding properties. The references cannot possibly teach or address all of the properties, but implicitly all of the properties are present.

6. In reference to claims 17 and 19, which specifies that the structuring agent forms an inner shell around the core and the polymer material forms an exterior shell around the inner shell. It would have been obvious to one of ordinary skill in the art at the time of the invention to form a dual layered microcapsule, wherein both outer layers comprise the structuring agent and the polymer material, however, each layer comprises the components in different amounts. The motivation to do so is provided by the fact that a thicker coating will better protect the core material and decrease chances of undesired core release. Further, a variation in the amounts of components will further increase the strength of the core material. Either the inner layer or the outer layer can comprise a greater amount of the structuring agent and thus can be considered the structuring agent layer. The corresponding is true for the polymer material. It is the examiner's position that selection of which layer comprises a greater amount of either material is rendered result effective variables because changing them will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

7. In view of this, it would have been obvious to one of ordinary skill in the art to utilize a greater amount of structuring agent in the inner layer so as to produce desired end results. Wherein it is clear that if the inner layer comprises a greater amount of structuring agent and the outer layer comprises a smaller amount of structuring agent, the gradient of claim 19 is obtained.

8. It is noted that the inner layer can be considered the structuring agent layer since it comprises the structuring agent, and the outer layer can be considered the polymer material layer since it comprises the polymer material.

9. In reference to claim 20 which specifies the method of forming the microencapsulated material, it is noted that this limitation renders the claim a product-by-process claim. Ciliberto discloses that the microcapsule is formed by spraying the coating onto the core particles (3:40-52). Thus, DeMott forms the microcapsules via spraying, as opposed to the claimed atomization, coacervation, or extrusion methods. However, since the prior art discloses the identical chemical microcapsule comprising the core and shell, the claimed product appears to be the same or similar to that of the prior art.

10. Wherein the claimed product appears to be the same or similar to that of the prior art, although produced by a different process. The examiner has provided a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP § 2113.

#### ***Response to Arguments***

11. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAIRA HAIDER whose telephone number is (571)272-3553. The examiner can normally be reached on Monday-Friday from 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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